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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,977	08/08/2001	Hideki Masudaya	9281-4147	3139

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Brinks Hofer Gilson & Lione
P.O. Box 10395
Chicago, IL 60610

EXAMINER

LIU, MING HUN

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/924,977

Applicant(s)

MASUDAYA, HIDEKI

Examiner

Ming-Hun Liu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,6 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,5,6 and 10-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,704,002 to Martin et al.

In reference to claim 1, Martin teaches an input unit provided with a manual manipulator, position sensors for supplying position signals corresponding to the direction and quantity in which the manual manipulator is driven (column 3, lines 9-35), actuators for providing an external force to the manual manipulator, and a control section for controlling the actuators (column 3, lines 36-41), wherein the control section computes an initial width of the movable range of the manual manipulator from its current position to an end of its possible motion according to changes in position signals supplied from the position sensors (column 3, lines 41-52), and wherein the control section controls the output to the actuators as a resistance is weakened when the computed initial width of the movable range is wide and the control section controls the output to the actuator as a resistance is increased when the computed initial width of the movable range is narrow (column 20, lines 10-20).

In reference to claim 5, Martin teaches an input unit provided with a manual manipulator, vehicle-mounted electric devices operated by the manual manipulator, position sensors for

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supplying position signals corresponding to the direction and quantity in which a pertinent vehicle-mounted electric device is driven (column 3, lines 9-35), actuators for providing an external force to the manual manipulator, and a control section for controlling the vehicle-mounted electric devices and the actuators, wherein the control section computes an initial width of the movable range of the vehicle-mounted electric device from its current position to an end of its possible motion according to changes in position signals supplied from the position sensors (column 3, lines 36-50), and wherein the control section controls the output to the actuators as a resistance is weakened when the computed initial width of the movable range is wide. and the control section controls the output to the actuator as a resistance is increased when the computed initial width of the movable range narrow (column 20, lines 10-20).

In reference to claim 11, Martin teaches an input device wherein the control section controls the output to the actuator to weaken a feel of resistance when the movable range is wide, and to emphasize the feel of resistance when the movable range is narrow (column 20, lines 10-20).

In reference to claim 12, Martin teaches an input device wherein the control section controls the output to the actuator to weaken a feel of resistance is weakened when the movable range is wide, and to emphasize the feel of resistance when the movable range is narrow (column 20, lines 10-20).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Levin.

In reference to claims 6 and 10, Martin teaches an invention that is similar to the one being claimed however his invention does not use memory table to obtain the desired actuating signals.

Levin in a similar invention teaches an input unit wherein a plurality of tables listing correlations between changes in the position signals and the output of the actuators are stored in the control section (column 20, lines 8-13), and a switching means for the tables is provided on or in the vicinity of the manual manipulator (column 5, lines 66-column 6, line 19).

It would have been obvious to one skilled in the art to include Levin's memory table and supply a switching means to choose the function table so the user of the device can change the force feedback to his/her liking.

In reference to claims 13 and 14, Martin teaches an input unit with a saturation period but not a jolt in the end of the movable range.

Levin on the other hand teaches an impactive resistance is felt on the manual manipulator when substantially the end of the movable range is reached (column 11, lines 61-64).

It would have been obvious to one skilled in the art to include the Levin's impactive resistance at the end of Martin's range of motion control to inform the user that the end of motion has been reached.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 5, 6 and 10-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

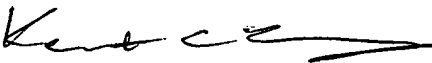
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ming-Hun Liu whose telephone number is (571)272-7770. The examiner can normally be reached on Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ming-Hun Liu


KENT CHANG
PRIMARY EXAMINER